



Annual Water Report

Reporting Year 2014

Presented by the Town of Hampstead



PWS ID#: 0060003

For more information on this report, or for any questions relating to your drinking water, please call:

Roger Steger, Water Department Superintendent

Kevin Hann, Assistant Superintendent

Phone: 410.239.6659

Email: Hampstead@carr.org

Annual Water Report 2014

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2014.

Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist should you ever have any questions or concerns about your water.

Where Does My Water Come From?

Our water source is the Wissahickon Aquifer, which lies about 300 feet below the Earth's surface. An Aquifer is an underground river that we tap by drilling wells and pumping the water to the surface for distribution. The 300 feet of earth between surface sources of contamination and this underground river help to purify our water. The Aquifer is a natural source of high-quality water and is naturally replenished by rainfall. From a system of fifteen deep wells, water moves through our treatment facilities and storage towers to your homes and businesses. Combined, our treatment facilities provide roughly 150 million gallons of clean drinking water every year.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders and some elderly and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Environmental Protection Agency/Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791 or <http://water.epa.gov/drink/hotline>.

Source Water Assessment

The Maryland Department of the Environment's Water Supply program has conducted a Source Water Assessment for the Town of Hampstead. The required components of this report as described in Maryland's Source Water Assessment Plan (SWAP) are delineation of an area that contributes water to the source, identification of potential sources of contamination and determination of the susceptibility of the water supply to contamination.

The system currently uses fifteen wells to obtain drinking water. Potential sources of contamination within the assessment area were identified based on site visits, database reviews and land use maps. Well information and water quality data were also reviewed.

The susceptibility analysis for the Town of Hampstead's water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics and well integrity. It was determined that all of Hampstead's wells are susceptible to contamination by inorganic compounds, volatile organic compounds, radioactive compounds and other regulated compounds.

If you would like to view this Plan, please contact our office during regular business hours.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

- 💧 **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- 💧 **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- 💧 **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses;
- 💧 **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff and septic systems;
- 💧 **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within the distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at such times. If you do not use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria before it was filled with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Town of Hampstead is responsible for providing high-quality drinking water; however, we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two (2) minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Information on Nitrates

Nitrate in drinking water at levels above ten (10) ppm is a health risk for infants of less than six (6) months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Radon

Radon is a radioactive gas that you cannot see, taste or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen and breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause an increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. There are simple ways to fix a radon problem that are not too costly and testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is four (4) pCi/L or higher. For additional information, call your state radon program or call the U.S. EPA's Radon Hotline at (800) SOS-RADON.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community or business is defined as the total volume of freshwater that is used to produce the good and services that are consumed by an individual, community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.

What Can I Do?

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are just a few tips:

- 💧 Automatic dishwashers use 15 gallons for every cycle regardless of how many dishes are loaded. Get a run for your money and load it to capacity.
- 💧 Turn off the tap when brushing your teeth.
- 💧 Check every faucet in your home for leaks. Even a slow drip can waste 15 – 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- 💧 Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- 💧 Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances and check the meter after 15 minutes. If it moved, you have a leak.

Community Participation

You are invited to participate in our Town Council Meetings held by the Mayor and Town Council on the second Tuesday of each month beginning at 7:30 p.m. in Town Hall. Town Hall is located at 1034 South Carroll Street, Hampstead, Maryland 21074.

Questions?

For more information about this report or for any questions relating to your drinking water, please call Roger Steger, Water Department Superintendent, or Kevin Hann, Assistant Superintendent at 410.239.6659. You may also send an email message to hampstead@carr.org.

Annual Drinking Water Quality Report

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentration of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Definitions

The acronyms used in the Annual Drinking Water Quality Report are defined below:

- 💧 **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- 💧 **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- 💧 **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- 💧 **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- 💧 **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- 💧 **Not Applicable (N/A)**
- 💧 **Picocuries Per Liter (pCi/L):** A measure of radioactivity.
- 💧 **Parts Per Billion (ppb):** One part substance per billion parts water (or micrograms per liter).
- 💧 **Parts Per Million (ppm):** One part substance per million parts water (or milligrams per liter).

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Inorganic Contaminants							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	HIGHEST LEVEL DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2012-2014	2	2	.18	.021 - .18	No	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposit
Chromium (ppb)	2012-2014	100	100	4	1 - 4	No	Discharge from steel and pulp mills; Erosion of natural deposits
Mercury (ppb)	2012	2	2	2	NA	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nickle (ppb)	2012 - 2014	100	100	7	1 - 7	No	Erosion of natural deposits or leaching
Nitrate (ppm)	2014	10	10	8.5	4.2 - 8.5	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2012	50	50	1	1 - 1	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Arsenic (ppb)	2012	10	0	1	NA	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Copper (ppm) (distribution)	2012	AL=1.3	1.3	.247 (90th percentile)	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb) (distribution)	2012	AL=15	0	2 (90th percentile)	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Volatile Organic Contaminants							
Total Trihalomethanes (THMs) Stage 2 (ppb) (distribution)	2014	80	0	20.21	10.41 - 20.21	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) Stage 2 (ppb) (distribution)	2014	60	0	6.42	1.17 - 6.42	No	By-product of drinking water disinfection
Radioactive Contaminants							
Alpha Emitters (pCi/L)	2011-2014	15	0	5.0	2.4 - 5.0	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2012-2014	50	0	7.0	4.8 - 7.0	No	Decay of natural and man-made deposits. *U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
Combined Radium 226/228 (pCi/L)	2011-2014	5	0	4.4	1.0 - 4.4	No	Erosion of natural deposits
Unregulated Contaminants							
Radon (pCi/L)	2009	N/A	N/A	3295	362.05 - 3295	No	Erosion of natural deposits
Sodium (ppm)	2014	N/A	N/A	95.1	93.7 - 95.1	No	Erosion of natural deposits
Chloroform (ppb)	2014	N/A	N/A	3.6	.7 - 3.6	No	By-product of drinking water chlorination
Bromoform (ppb)	2014	N/A	N/A	1	N/A	No	By-product of drinking water chlorination
Bromodichloromethane (ppb)	2014	N/A	N/A	3.9	N/A	No	By-product of drinking water chlorination
Dibromochloromethane (ppb)	2014	N/A	N/A	3.3	N/A	No	By-product of drinking water chlorination
Magnesium (ppm)	2014	N/A	N/A	0.371	N/A	No	One of the elements that make up the earth's crust as components of many rock-forming minerals, such as dolomite